

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 January 2001 (25.01.2001)

PCT

(10) International Publication Number
WO 01/05337 A1

(51) International Patent Classification⁶: A61F 2/32

(21) International Application Number: PCT/US99/16070

(22) International Filing Date: 16 July 1999 (16.07.1999)

(25) Filing Language: English

(26) Publication Language: English

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:

US	08/726,313 (CON)
Filed on	2 October 1996 (02.10.1996)
US	08/600,744 (CON)
Filed on	13 February 1996 (13.02.1996)
US	08/798,638 (CON)
Filed on	11 February 1997 (11.02.1997)

(71) Applicants (for all designated States except US): THE
GENERAL HOSPITAL CORPORATION [US/US];

55 Fruit Street, Boston, MA 02114 (US). MASSACHUSETTS INSTITUTE OF TECHNOLOGY [US/US]; 77 Massachusetts Avenue, Cambridge, MA 02142-1324 (US).

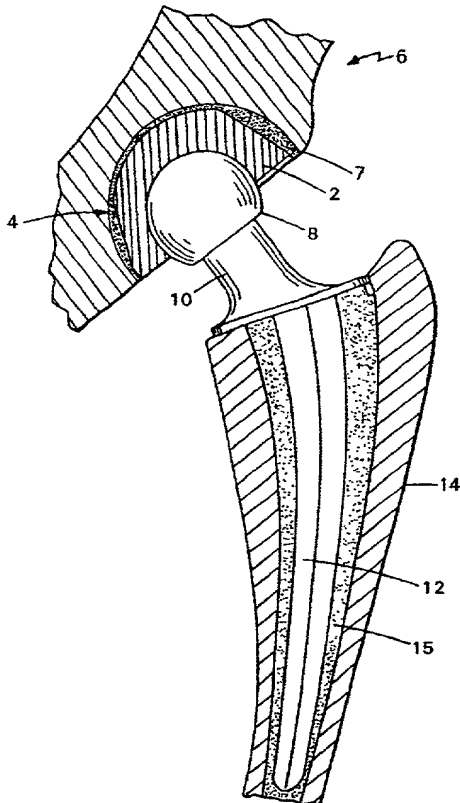
(72) Inventors; and

(75) Inventors/Applicants (for US only): HARRIS, William, H. [US/US]; 665 Concord Avenue, Belmont, MA 02178 (US). JASTY, Murali [US/US]; 73 Chestnut Street, Weston, MA 02193 (US). MURATOGLU, Orhun [TR/US]; 5 Dana Street, Cambridge, MA 02138 (US). O'CONNOR, Daniel [US/US]; 58 Stevens Street, East Taunton, MA 02178 (US). MERRILL, Edward, W. [US/US]; 90 Somerset Street, Belmont, MA 02178 (US). VENUGOPALAN, Premnath [IN/US]; 170 Webster Avenue, Cambridge, MA 02141 (US). BRAGDON, Charles [US/US]; 1156 Pleasant Street, East Weymouth, MA 02189 (US).

(74) Agent: GAGEL, John, J.; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).

[Continued on next page]

(54) Title: POLYETHYLENE HIP JOINT PROSTHESIS WITH EXTENDED RANGE OF MOTION



(57) Abstract: A hip joint prostheses including an acetabular cup (2) mounted in the hip socket (4) of the pelvis (6) is disclosed. The prosthesis also includes a head (8) which has a radius of curvature complementary to the cavity in the acetabular cup (2). The head (8) is typically made of metal. A neck (10) is connected to the head (8) joining the head (8) to the stem (12). The head (8), and the acetabular cup (2) are designed to allow a great deal of angular articulation. The bearing portions can be made with radiation treated ultrahigh molecular weight polyethylene polymer having substantially no detectable free radicals.

WO 01/05337 A1

206070 00604001